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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/910,669 | 07/20/2001 | Gregory S. Francis | 920070.406 | 3153 |

27370 7590 04/02/2004

OFFICE OF THE STAFF JUDGE ADVOCATE
U.S. ARMY MEDICAL RESEARCH AND MATERIEL COMMAND
ATTN: MCMR-JA (MS. ELIZABETH ARWINE)
504 SCOTT STREET
FORT DETRICK, MD 21702-5012

| EXAMINER | |
|---|---|
| ZHOU, TING | |
| **ART UNIT** | **PAPER NUMBER** |
| 2173 | 4 |

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/910,669 | FRANCIS ET AL. | |
| | Examiner | Art Unit | |
| | Ting Zhou | 2173 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) 1-27 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-8, 10-17, 19-26 is/are rejected.

7)☒ Claim(s) 9,18 and 27 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 20 July 2001 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Specification*

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract is objected to because it is too long in length. It is suggested that the applicant revise the abstract to be within the range of 50 to 150 words.

### *Allowable Subject Matter*

2. Claims 9, 18 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-5, 10-14 and 19-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Wagner et al. U.S. Patent 6,002,395.

Referring to claims 1, 10 and 19, Wagner et al. teach a method and system comprising means and circuitry (the developmental computing system comprising a processor, memory, and display taught in the Wagner et al. reference comprises circuitry) (column 3, lines 18-30) for accepting user input specifying a geometrical arrangement of two or more buttons on one or more displayed pages (using the GUI builder to specify a placement of buttons such as

"PIZZAS", "SANDWICHES", "COFFEE", etc. in the sample pizza shop application shown in Figure 2A, which is an example of the reference's teachings) (column 2, lines 21-28, column 3, lines 45-52 and column 4, lines 36-53), means and circuitry for accepting user input labeling at least two of the two or more buttons on the one or more displayed pages (naming the titles of the buttons shown in Figure 2A; for example, assigning the name "SPECIAL DELUX" to button represented by reference number "211-3") (column 4, lines 37-46 and further shown Figures 3A-3C, which show controls representing the position and name of the desired button on the GUI), means and circuitry for accepting user input defining at least one interaction between the labeled at least two buttons (relationships between buttons, for example, pressing the "BEER" button in Figure 2A deletes and replaces the buttons in the "DRINK" screen) (column 4, lines 54-62), means and circuitry for accepting user input specifying at least one constraint cost for the defined at least one interaction (for example, it can be seen that the buttons "PIZZAS", "SPECIAL PEPPERONI", "SPECIAL DELUX" and "SPECIAL VEGGIE" would need to be placed together under the "PIZZA" category in Figure 2A), and means and circuitry for assigning labels of the at least two buttons among the two or more buttons on one or more displayed pages such that the at least one constraint cost is substantially optimized (controls shown in Figures 3A-3C associated with each button shown in Figures 2A-2D) (column 4, lines 27-62 and column 13, lines 32-45). This is further recited in column 26, lines 5-35 and shown in Figures 5B and 5C, where logic is given to modify and move buttons and screens according to their relationships.

Referring to claims 2, 11 and 20, teaches accepting user input specifying one or more sizes of the one or more displayed pages, as recited in column 17, lines 1-10.

Referring to claims 3, 12 and 21, teaches accepting user input specifying two or more locations (positions) of the two or more buttons on the one or more displayed pages, as recited in column 8, lines 61-67 and column 9, lines 1-4 and lines 34-52.

Referring to claims 4, 13 and 22, teaches accepting user input labeling (naming) at least two buttons on a first displayed page presented to the user, as recited in column 4, lines 11-21 and column 24, lines 16-24.

Referring to claims 5, 14 and 23, teaches accepting user input labeling at least one button on a first displayed page presented to the user and accepting user input labeling at least one button on a second displayed page presented to the user (for example, labeling the button "211-2" as "SPECIAL PEPPERONI" in Figure 2A on the first displayed screen, and the button "231-7" as "INDIVIDUAL PAN" in Figure 2D on a subsequently displayed screen) (column 4, lines 11-21 and column 24, lines 16-24).

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 6-7, 15-16 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wagner et al. U.S. Patent 6,002,395, as applied to claims 1, 10 and 19 above, and further in view of Ikemoto U.S. Patent 5,969,717.

Referring to claims 6, 15 and 24, while Wagner et al. teach all of the limitations as applied to the claims above, they fail to explicitly teach accepting user input identifying at least one relationship between the labeled at least two buttons selected from a group including a Fitt's movement interaction, a Euclidean-distance interaction, a city-block distance interaction, an x-directed interaction and a y-directed interaction. Ikemoto teaches a method for specifying an arrangement of at least two buttons in building a GUI (column 2, lines 32-46 and further shown in Figure 1) similar to that of Wagner et al. In addition, Ikemoto further teaches identifying the relationship between buttons including a position and distance interaction of the buttons (x-directed distance between components and y-directed distance between components) (column 6, lines 56-59, column 7, lines 1-7 and column 10, lines 29-44). Fitt's movement interaction, Euclidean-distance interaction, a city-block distance interaction, a x-directed interaction and y-directed interaction are all distance related relationships and therefore, could be included in the group of relationships defined between the labeled buttons. It would have been obvious to one of ordinary skill in the art, having the teachings of Wagner et la. and Ikemoto before him at the time the invention was made, to modify the GUI building method of Wagner et al. to include the use of distance related metrics to define relationships between GUI components, as taught by Ikemoto. One would have been motivated to make such a combination in order to create an efficient interactive process between the user and the GUI builder program; by allowing the users

to specifying exactly the distance between each and every component on the display screen, users will be able to create an interface customized to their preferences and needs.

Referring to claims 7, 16 and 25, while Wagner et al. teach all of the limitations as applied to the claims above, they fail to explicitly teach specifying at least one constraint cost for the at least one interaction selected from a group including a global-difficulty cost, a pages-to-close-buttons cost, a pages-to-fixed buttons cost, a path-difficulty cost, a pages-to-far buttons cost, and a parent-to-child variability cost. Ikemoto teaches a method for specifying a relationship and interaction between components of a GUI (column 13, lines 25-42 and further shown in Figures 12 and 14) similar to that of Wagner et al. In addition, Ikemoto further teaches identifying the constraint cost for the interaction of components including a pages-to-far buttons cost and a parent-child variability cost (components that are unrelated to each other are placed in separate areas on the display screen and a consistent hierarchical parent-child display of components) (column 13, lines 25-42 and further shown in Figures 12, 15A and 21). Global-difficulty cost, a pages-to-close-buttons cost, a pages-to-fixed buttons cost, a path-difficulty cost, a pages-to-far buttons cost, and a parent-to-child variability cost are all types of interaction relationships between components and therefore, could be included in the group of constraint cost relationships between GUI components. It would have been obvious to one of ordinary skill in the art, having the teachings of Wagner et la. and Ikemoto before him at the time the invention was made, to modify the GUI building method of Wagner et al. to include the use of constraint costs for the interaction of GUI components, as taught by Ikemoto. One would have been motivated to make such a combination in order to create an efficient interactive process between the user and the GUI builder program; by allowing the users to specifying exactly what factors

and relationships are the most important in placing components on the display screen, users will be able to create an interface customized to their preferences and needs.

5. Claims 8, 17 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wagner et al. U.S. Patent 6,002,395, as applied to claims 1, 10 and 19 above, and further in view of Shimogori U.S. Patent 5,973,686.

Referring to claims 8, 17 and 26, while Wagner et al. teach all of the limitations as applied to the claims above, they fail to teach accepting user input specifying at least one weighting factor to be associated with the specified at least one constraint cost. Shimogori teaches creating display parts (such as buttons) for a GUI and rules for governing the conversion of display parts similar to the relabeling of buttons according to costs of Wagner et al. In addition, Shimogori further teaches at least one weighting factor (weight information) associated with the specified at least one cost (rules), as recited in column 2, lines 17-29 and column 14, lines 51-60. It would have been obvious to one of ordinary skill in the art, having the teachings of Wagner et al. and Shimogori before him at the time the invention was made, to modify the GUI builder method and system taught by Wagner et al. to include the weighting factor of Shimogori. It would have been advantageous for one to utilize such a combination in order to allow users to define priorities and rank the rules in order of their importance when creating a GUI, ensuring more user satisfaction with the GUI's look and operations.

6. The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111(c) to consider

these references fully when responding to this action. The documents cited therein teach similar systems and methods for building and displaying component of a graphical user interface.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ting Zhou whose telephone number is (703)305-0328. The examiner can normally be reached on Monday - Friday 7:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on (703) 308-3116. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 29, 2004

JOHN CABECA
SUPERVISORY PATENT EXAMIN
TECHNOLOGY CENTER 21